

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims

1-53. Canceled.

1 54. (Previously Presented) An endoluminal prosthesis system comprising:
2 an expandable tubular Y-connector module having a common lumen, a first
3 branch lumen, and a second branch lumen, the first and second branch lumens being in
4 communication with the common lumen; and

5 a plurality of radially expandable prosthetic modules, each module having a
6 tubular body portion and an end which fittingly engages at least one of the common lumen, the
7 first branch lumen, and the second branch lumen;

8 wherein the plurality of body portions provide different selectable assembled
9 endoluminal prosthetic characteristics.

1 55. (Previously Presented) A prosthesis system as claimed in claim 54, wherein
2 at least two of the plurality of body portions differ in cross-section.

1 56. (Previously Presented) A prosthesis system as claimed in claim 54, wherein
2 engagement of the end of each prosthetic module with the Y-connector module affixes the
3 prosthetic module and the Y-connector module with an axial overlap.

1 57. (Previously Presented) A position-indicating stent-graft comprising:
2 a radially expandable tubular frame;
3 a flexible liner supported by the frame;
4 an attachment mechanism which holds the liner on the frame; and

5 markers disposed on at least one of the frame, the liner, and the attachment
6 mechanism, the markers visible under imaging to indicate at least one of axial and rotational
7 position of the stent-graft.

1 58. (Previously Presented) A position-indicating stent-graft as claimed in claim
2 57, wherein the markers indicate position under imaging while in a compressed mode and while
3 in an expanded mode.

1 59. (Previously Presented) A position-indicating stent-graft as claimed in claim
2 57, wherein the markers comprise a rotational indicator.

1 60. (Previously Presented) A modular endoluminal prosthesis placement
2 method comprising: inserting a Y-connector prosthetic module within a body lumen system;
3 positioning a main body of the Y-connector prosthetic module at a target location
4 of a body lumen, the target location adjacent to first and second branch lumens of the body
5 lumen system;

6 radially expanding the first prosthetic module at the target location;

7 selecting a preferred first branch prosthetic module from a plurality of alternative
8 branch prosthetic modules having differing prosthetic characteristics; and

9 positioning an end of the preferred first branch prosthetic module within the first
10 branch of the body lumen system and radially expanding the preferred first branch prosthetic
11 module, the expanded preferred first branch prosthetic module engaging the Y-connector
12 prosthetic module.

1 61. (Previously Presented) A method for assembling endoluminal prosthetic
2 modules within a body lumen, the method comprising:

3 deploying a first tubular prosthetic module within the body lumen;

4 inserting a second tubular prosthetic module into the body lumen in a radially
5 compressed configuration;

6 aligning an image of markings disposed on at least one of the first prosthetic
7 module and the second prosthetic module with an image of the other of the first prosthetic
8 module and the second prosthetic module; and

9 expanding an end of the aligned second prosthetic module to engage an end of
10 the first prosthetic module.

1 62. (Previously Presented) The endoluminal prosthesis system as claimed in
2 claim 54, wherein a portion of at least one of said modules has a different radiopacity, said
3 portion of different radiopacity facilitating proper alignment of said modules with respect to one
4 another during said engagement.

1 63. (Previously Presented) The endoluminal prosthesis system as claimed in
2 claim 54 further comprising:

3 radiographic indicia defined on at least one of said modules and having different
4 radiopacity from said module, wherein the composite radiographic image of said radiographic
5 indicia varies with the rotational orientation of said module in a body lumen;

6 wherein the rotational orientation of said module in the body lumen is indicated
7 by said radiographic image for optional adjustment of the rotational orientation.

1 64. (Previously Presented) A system for introducing the endoluminal prosthesis
2 system of claim 54 into a vessel to define a continuous lumen, said system comprising:

3 a first introducer for introducing a first module of said endoluminal prosthesis
4 system into the vessel, said first module having a portion adapted for connection to another
5 module; and

6 a second introducer for (a) introducing a second module of said endoluminal
7 prosthesis system in a radially compressed state into the vessel and into said portion of said
8 first module, and (b) deploying said second module to connect to said portion of said first
9 module and to define said continuous lumen through said first module and said second
10 module.

1 65. (Previously Presented) The endoluminal prosthesis system as claimed in
2 claim 54, said endoluminal prosthesis system being configured for placement at an angeological
3 bifurcation of a vessel into two branched vessels, said expandable tubular Y-connector module
4 at least partially supported by a bifurcated stent member, defining two lumens, at least one of
5 which is configured to be disposed entirely within said vessel and is adapted to mate with one
6 of said radially expandable prosthetic modules configured to extend into one of the two
7 branched vessels.

1 66. (Previously Presented) The endoluminal prosthesis system as claimed in
2 claim 54, said endoluminal prosthesis system comprising a male engaging portion on a selected
3 one of said modules, and a female portion on another one of said modules, said male engaging
4 portion being configured to be positioned at least partially within said female portion for inter-
5 engagement between the outer surface of said male engaging portion and the inner surface of
6 said female portion to resist longitudinal movement to prevent separation of said modules in
7 service, each of said male engaging portion and said female portion comprising a stent and at
8 least one of said modules comprising a graft layer attached to said stent, said graft layer being

9 configured to be interposed between said male engaging portion and said female portion to
10 form a substantially fluid-tight seal upon assembly.

1 67. (Previously Presented) A prosthesis comprising:

2 (i) a bifurcated base structure which defines a common flow lumen and a pair of
3 connector legs which define divergent flow lumens from the common flow lumen; and

4 (ii) a graft which is adapted to be anchored within one of the flow lumens of said
5 bifurcated base structure to form a continuous extension of that lumen.

1 68. (Previously Presented) A prosthesis comprising:

2 a first graft comprising a proximal portion, a first distal portion, and a second
3 distal portion;

4 said proximal portion defining a lumen and adapted to be disposed within a blood
5 vessel in juxtaposition with a bifurcation;

6 said first distal portion defining a lumen and adapted to allow blood to flow from
7 said proximal portion into a first branched blood vessel;

8 said second distal portion defining a lumen and adapted to allow blood to flow
9 from said proximal portion into a second branched vessel; and

10 a second graft defining a lumen and adapted to be intravascularly inserted into a
11 lumen of said first graft to allow blood to flow through the lumen defined by said second graft;
12 and

13 wherein said first distal portion has a downstream end forming a skirt.

1 69. (Previously Presented) The prosthesis as defined in claim 67, wherein said
2 bifurcated base structure and said graft are formed of a thin biocompatible material.

1 70. (Previously Presented) A graft for treatment of aneurysms or occlusive
2 diseases comprising:

3 a primary graft body, said primary graft body having a primary graft flow lumen
4 therethrough, said primary graft body comprising a first portion and a second portion; and

5 a supplemental graft body, said supplemental graft body having a secondary
6 graft flow lumen therethrough, said supplemental graft body comprising a first end and a
7 second end, said first end of said supplemental graft body being dockable to said second portion
8 of said primary graft body while inside of a vessel to define a single flow lumen which transfers
9 substantially all flow between said primary graft flow lumen and said secondary graft flow
10 lumen.

1 71. (Previously Presented) The graft as defined in claim 70, wherein said primary
2 graft body is circumferentially reinforced at locations along its length by a plurality of separate
3 spaced apart wires.

1 72. (Previously Presented) The graft as defined in claim 71, wherein each of
2 said separate spaced apart wires comprises two opposing ends, said ends being joined together
3 on the outside surface of said primary graft body.

1 73. (Previously Presented) The graft as defined in claim 71, wherein at least
2 one of the reinforcement wires is attached to said primary graft body via sutures.

1 74. (Previously Presented) The graft as defined in claim 71, wherein at least
2 one of the reinforcement wires is attached to said primary graft body.

1 75. (Previously Presented) The graft as defined in claim 70, wherein said
2 supplemental graft body is circumferentially reinforced at locations along its length by a
3 plurality of separate, spaced apart wires.

1 76. (Previously Presented) The graft as defined in claim 75, wherein each of
2 said separate wires comprise two opposing ends, said ends being joined together on the outside
3 surface of said supplemental graft body.

1 77. (Previously Presented) The graft as defined in claim 75, wherein at least
2 one of the reinforcement wires is attached to said supplemental graft body via sutures.

1 78. (Previously Presented) The graft as defined in claim 75, wherein at least
2 one of the reinforcement wires is attached to said supplemental graft body.

1 79. (Previously Presented) The graft as defined in claim 71, wherein at least
2 one of the reinforcement wires has a different amplitude than the next adjacent wire.

1 80. (Previously Presented) The graft as defined in claim 75, wherein at least
2 one of the reinforcement wires has a different amplitude than the next adjacent wire.

1 81. (Previously Presented) The graft as defined in claim 71, wherein one of the
2 reinforcement wires is located at one end of the primary graft body and has alternate crests or
3 apices extending beyond said one end of the primary graft body.

1 82. (Previously Presented) The graft as defined in claim 70, wherein material of
2 said primary graft body is crimped along its length.

1 83. (Previously Presented) The graft as defined in claim 70, wherein material of
2 said supplemental graft body is crimped along its length.

1 84. (Previously Presented) The graft as defined in claim 70, wherein said
2 primary graft body and said supplemental graft body are formed of a thin biocompatible
3 material.

1 85. (New) An endoluminal prosthesis system comprising:
2 an expandable tubular Y-connector module having a common lumen, a first
3 branch lumen, and a second branch lumen, the first and second branch lumens being in
4 communication with the common lumen; and
5 a plurality of radially expandable prosthetic modules, each module having a
6 tubular body portion and an end which fittingly engages at least one of the common lumen, the
7 first branch lumen, and the second branch lumen;

8 wherein the plurality of body portions provide different selectable assembled
9 endoluminal prosthetic characteristics.

1 86. (New) A prosthesis system as claimed in claim 85, wherein at least two of
2 the plurality of body portions differ in cross-section.

1 87. (New) A prosthesis system as claimed in claim 85, wherein engagement of
2 the end of each prosthetic module with the Y-connector module affixes the prosthetic module
3 and the Y-connector module with an axial overlap.

1 88. (New) A position-indicating stent-graft comprising:

2 a radially expandable tubular frame;

3 a flexible liner supported by the frame;

4 an attachment mechanism which holds the liner on the frame; and

5 markers disposed on at least one of the frame, the liner, and the attachment
6 mechanism, the markers visible under imaging to indicate at least one of axial and rotational
7 position of the stent-graft.

1 89. (New) A position-indicating stent-graft as claimed in claim 88, wherein the
2 markers indicate position under imaging while in a compressed mode and while in an expanded
3 mode.

1 90. (New) A position-indicating stent-graft as claimed in claim 88, wherein the
2 markers comprise a rotational indicator.

1 91. (New) A modular endoluminal prosthesis placement method comprising:
2 inserting a Y-connector prosthetic module within a body lumen system;
3 positioning a main body of the Y-connector prosthetic module at a target location
4 of a body lumen, the target location adjacent to first and second branch lumens of the body
5 lumen system;

6 radially expanding the first prosthetic module at the target location;

7 selecting a preferred first branch prosthetic module from a plurality of alternative
8 branch prosthetic modules having differing prosthetic characteristics; and

9 positioning an end of the preferred first branch prosthetic module within the first
10 branch of the body lumen system and radially expanding the preferred first branch prosthetic
11 module, the expanded preferred first branch prosthetic module engaging the Y-connector
12 prosthetic module.

1 92. (New) A method for assembling endoluminal prosthetic modules within a
2 body lumen, the method comprising:

- 3 deploying a first tubular prosthetic module within the body lumen;
- 4 inserting a second tubular prosthetic module into the body lumen in a radially
- 5 compressed configuration;
- 6 aligning an image of markings disposed on at least one of the first prosthetic
- 7 module and the second prosthetic module with an image of the other of the first prosthetic
- 8 module and the second prosthetic module; and
- 9 expanding an end of the aligned second prosthetic module to engage an end of
- 10 the first prosthetic module.